

CLAIMS

What is claimed is:

1. An antibody or antigen-binding fragment thereof, which binds to a mammalian
5 GPR-9-6 and inhibits the binding of a ligand to said GPR-9-6.
2. The antibody or antigen-binding fragment of Claim 1 wherein said mammalian
GPR-9-6 is human GPR-9-6.
3. The antibody or antigen-binding fragment of Claim 1 wherein said ligand is
TECK.
- 10 4. The antibody or antigen-binding fragment of Claim 1 wherein the binding of
said antibody or said antigen-binding fragment to GPR-9-6 can be inhibited by a
peptide that consists of the amino acid sequence of SEQ ID NO:3.
5. The antibody or antigen-binding fragment of Claim 1 wherein the binding of
15 said antibody or said antigen-binding fragment to GPR-9-6 can be inhibited by
mAb 3C3.
6. The antibody or antigen-binding fragment of Claim 5 wherein said antibody or
antigen binding fragment binds to the same or a similar epitope as mAb 3C3.
7. An antibody produced by murine hybridoma 3C3 or an antigen-binding
fragment thereof.

8. An isolated cell which produces an antibody or antigen-binding fragment thereof which binds to a mammalian GPR-9-6 and inhibits the binding of a ligand to said GPR-9-6.
9. The isolated cell of Claim 8 wherein said mammalian GPR-9-6 is human GPR-9-6.
10. The isolated cell of Claim 9 wherein said ligand is TECK.
11. The isolated cell of Claim 10 wherein said isolated cell is selected from the group consisting of an immortalized B cell, a hybridoma and a recombinant cell comprising one or more exogenous nucleic acid molecules that encode said antibody or antigen-binding fragment thereof.
12. The murine hybridoma 3C3.
13. A method of detecting a mammalian GPR-9-6 or portion thereof by in a biological sample, comprising:
- a) contacting a biological sample with an antibody or antigen-binding fragment thereof which binds to a mammalian GPR-9-6 or portion of said receptor and inhibits binding of a ligand to the receptor, under conditions appropriate for binding of said antibody or antigen-binding fragment thereof to a mammalian GPR-9-6 or portion thereof; and
- b) detecting binding of said antibody or antigen-binding fragment thereof; wherein the binding of said antibody or antigen-binding fragment thereof indicates the presence of said receptor or portion of said receptor.
14. The method according to Claim 13, wherein the biological sample is of human origin.

15. The method according to Claim 14, wherein the antibody or antigen-binding fragment thereof is selected from the group consisting of:
- a) mAb 3C3;
 - b) an antibody which can compete with mAb 3C3 for binding to a mammalian GPR-9-6;
 - c) antigen-binding fragments of (a) or (b) which bind a mammalian GPR-9-6 or a portion thereof; and
 - d) combinations of the foregoing.
16. A method of detecting and identifying an agent which binds to a mammalian GPR-9-6 or a ligand binding variant thereof comprising combining:
- a) a reference agent,
 - b) a test agent, and
 - c) a composition comprising a functional mammalian GPR-9-6 or a ligand binding variant thereof under conditions suitable for binding of said reference agent to said GPR-9-6 or ligand-binding variant thereof; and detecting or measuring the formation of a complex between said reference agent and said GPR-9-6 or a ligand binding variant thereof, wherein, a decrease in the formation of said complex relative to a suitable control indicates that said test agent binds to said GPR-9-6 or to a ligand-binding variant thereof.
17. The method of Claim 16 wherein said reference agent is labeled with a label selected from the group consisting of a radioisotope, an epitope, an affinity label, an enzyme, a fluorescent group and a chemiluminescent group.
18. The method of Claim 16 wherein said reference agent is TECK.

19. The method of Claim 16 wherein said reference agent is an antibody which binds to said GPR-9-6 or an antigen-binding fragment thereof.
20. The method of Claim 16 wherein said composition comprising a functional mammalian GPR-9-6 or a ligand binding variant thereof is a cell that expresses a mammalian GPR-9-6.
21. The method of Claim 20 wherein said cell is a recombinant cell.
22. The method of Claim 20 wherein said cell is a cell line.
23. The method of Claim 23 wherein said cell is selected from the group consisting of MOLT-4 and MOLT-13.
24. The method of Claim 16 wherein said composition comprising a functional mammalian GPR-9-6 or a ligand binding variant thereof is a membrane preparation of a cell that expresses a mammalian GPR-9-6 or a ligand binding variant thereof.
25. A method of detecting or identifying an inhibitor of a mammalian GPR-9-6 receptor comprising:
- a) combining an agent to be tested, a ligand or promoter of said GPR-9-6 and a cell expressing said GPR-9-6 under conditions suitable for detecting a ligand- or promoter-induced response; and
 - b) determining the ability of the test compound to inhibit said response, wherein inhibition of a ligand- or promoter-induced response by the agent is indicative that the agent is an inhibitor.

26. The method of Claim 25 wherein said cell is a recombinant cell expressing a human GPR-9-6.
27. The method of Claim 26 wherein said ligand or promoter is TECK.
28. The method of Claim 25 wherein said response is chemotaxis or Ca^{2+} flux.
- 5 29. A method of treating a subject having an inflammatory disease, comprising administering an effective amount of an antagonist of a mammalian GPR-9-6 function to said subject.
30. The method of Claim 29 wherein said inflammatory disease is Crohn's disease or colitis.
- 10 31. The method of Claim 29 wherein said antagonist inhibits the binding of a ligand to a mammalian GPR-9-6.
32. The method of Claim 31 wherein said ligand is TECK.
33. The method of Claim 31 wherein said antagonist is an antibody which binds to a mammalian GPR-9-6 or an antigen-binding fragment thereof.
- 15 34. A method of inhibiting GPR-9-6-mediated homing of leukocytes in a subject, comprising administering an effective amount of an antagonist of GPR-9-6 function to said subject.
35. The method of Claim 34 wherein said antagonist inhibits the binding of a ligand to GPR-9-6.

36. The method of Claim 35 wherein said ligand is TECK.
37. The method of Claim 36 wherein said antagonist is an antibody which binds to GPR-9-6 or an antigen-binding fragment thereof.
38. A method of inhibiting GPR-9-6-mediated homing of leukocytes to mucosal
5 tissue in a subject, comprising administering an effective amount of an antagonist of GPR-9-6 function to said subject.
39. A method of treating a subject having an inflammatory bowel disease, comprising administering an effective amount of an antagonist of GPR-9-6 function to said subject.
- 10 40. The method of Claim 39 wherein said antagonist inhibits the binding of a ligand to GPR-9-6.
41. The method of Claim 40 wherein said ligand is TECK.
42. The method of Claim 41 wherein said antagonist is an antibody which binds to GPR-9-6 or an antigen-binding fragment thereof.
- 15 43. A method of modulating a GPR-9-6 function comprising contacting a cell that expresses GPR-9-6 with an agent which binds thereto, thereby modulating the function of said GPR-9-6.
44. The method of Claim 43 wherein said agent can inhibit a function of GPR-9-6.
45. The method of Claim 44 wherein said agent is an antibody or antigen-binding
20 fragment thereof.

46. The method of Claim 45 wherein said function is selected from the group consisting of ligand binding, ligand-induced chemotaxis and ligand-induced Ca^{2+} flux.
47. The method of Claim 46 wherein said ligand is TECK.
- 5 48. A test kit for use in detecting the presence of a mammalian GPR-9-6 or portion thereof in a biological sample comprising
- 10 a) at least one antibody or antigen-binding fragment thereof which binds to a mammalian GPR-9-6 or portion of said receptor, wherein said antibody or antigen-binding fragment thereof inhibits binding of a ligand to the receptor; and
- b) one or more ancillary reagents suitable for detecting the presence of a complex between said antibody or antigen-binding fragment thereof and said mammalian GPR-9-6 or a portion thereof.
- 15 49. A test kit according to Claim 48, wherein the antibody is selected from the group consisting of
- 20 a) mAb 3C3;
- b) an antibody which can compete with mAb 3C3 for binding to mammalian GPR-9-6;
- c) antigen-binding fragments of (a) or (b) which bind to mammalian GPR-9-6 or a portion thereof; and
- d) combinations of the foregoing.